

(in step with sustainability)



Bentall LP Applies State-of-the-Art Technology and Best Practices to Green Properties in Canada

by Cheryl A. Gray, CPM®

Sustainable property management is currently at the forefront of industry thinking in Canada. The move toward more energy-efficient buildings has presented my organization, Bentall LP, with an opportunity to not only reduce energy costs, but to evaluate the very criteria by which we measure the value of an asset. This progression in thinking represents the natural evolution in responsible property investing (RPI).

As a real estate advisory and services organization, we view the tenets of RPI as a framework to assess risks, identify opportunities, deploy continuous improvement thinking into our practices and operations, and create long-term value for our clients and their assets. This view, along with the many questions we receive from clients, tenants and colleagues, such as, “How do you measure sustainability?” and “What is sustainability worth in dollars, in energy, in preservation of the asset and in reputation?” have continually shaped our green efforts since we began evaluating properties in 2006.

(establishing a baseline)

In order to answer the questions above, we had to prove that lower utility costs realized through energy-efficient programs, tools and technology, operational best practices and social responsibility initiatives, in combination with a well designed and well located building, offer a competitive leasing advantage.

We developed and deployed Eco-Tracker, our online utility, waste and GHG tracking system for streamlining our assessment, measurement and reporting practices. Through this technology we are able to get real-time views of energy performance at properties. Eco-Tracker analyzes and compares the performance of our properties with other buildings, and benchmarks against performance averages over multiple years. Reporting can be consolidated at regional, portfolio and client levels.

When it comes to benchmarking sustainable building initiatives, we know we're not alone. The Canadian federal government has dedicated funds and resources to greening the government, including the pursuit of sustainable and efficient buildings. Currently, the government is assessing buildings under BOMA Canada's Building Environmental Standards (BEST), a certification program with standards for energy and environmental performance based on independently verified information. It is also renovating the Canada Green Building Council's Leadership in Energy and Environmental Design (LEED) standards and updating the Model National Energy Code for Buildings, a benchmarking, labeling and rating system aimed at creating parity and standardization in assessment criteria.

Establishing a baseline through benchmarking, measuring, monitoring and reporting are paramount to enabling detailed evaluation, thoughtful consideration and finally, systematic action. At Bentall, we invest in tools, technologies, design policies and best practices, so our actions yield results, as evidenced by the following property case studies:

THE BUSINESS CASE FOR GREEN: *The Sun Life Building in Montreal, Quebec*

When it comes to sustainability, whether it's altering your business practices, developing new technology, retrofitting existing properties or constructing new buildings, the discussion of cost always comes up. While the initial costs of retrofitting a building's systems can be expensive, a more energy-efficient property can result in tremendous savings.

The Sun Life Building is jointly owned by Sun Life Financial and SITQ (a subsidiary of the Caisse de dépôt et placement du Québec) and managed by Bentall LP. Originally constructed in 1918, the Sun Life Building was widely rumored to have been the secret hiding place of the Crown Jewels of England during the Second World War. Our goal was to improve the energy efficiency of this historic place through a combination of straightforward and state-of-the-art sustainable options.

The building's HVAC system is comprised of over 1500 heat pumps. One of our initial steps was to employ a



THE BENTALL CENTRE [LEFT] AND THE SUN LIFE BUILDING [RIGHT] BOTH OFFERED SUSTAINABILITY CHALLENGES FOR BENTALL LP.

heat pump replacement program using newer and more efficient equipment. All HVAC controls for the 1500 heat pumps were upgraded, including a new building automation system. Air quality was enhanced by injecting fresh air at a rate of 10 liters per second into the inter-ceiling space, which is then circulated by the heat pumps.

We also optimized the heat pump loop. In addition to creating a well-balanced heat exchange system, excess heat is used to pre-heat the fresh air ventilation systems. With this new operation, the need for steam consumption for heating was eliminated. This resulted in a 30 percent reduction in overall steam consumption annually.

In addition, the lighting system of the building was also completely overhauled using fully automated technology, divided into zones on all floors.

After these retrofits were implemented, unadjusted electrical consumption at the Sun Life Building was reduced by 14 percent in 2009 (over the base year of 2004). In 2004, consumption was 33 million kilowatt-hours (MkWh) annually versus 29M kWh in 2009. Occupancy in the base year was 86 percent compared to 97 percent in 2009. In addition, the tenant mix changed to include a 24/7 call center operation and gaming centers.

Overall, our sustainability efforts surpassed expectations. Building staff and tenant engagement was enhanced, measurable and quantifiable energy cost reductions were achieved and the building's rich history was preserved.

MORE THAN A CAPITAL INVESTMENT: *Bentall Centre in Vancouver, British Columbia*

Energy is a large portion of operational costs for build-

ings so there is significant value in investing in efficiency systems to manage this cost. But systems are only part of the equation. Landlords have access to a large pool of strategic partners that have a huge impact on a building's energy performance—tenants.

The Bentall Centre consists of four office towers occupying an entire city block in the heart of the financial district. Bentall Centre is jointly owned by SITQ and The Great-West Life Assurance Company. The four towers are connected via a 52,000 square foot underground retail concourse. It is the largest integrated office complex in Western Canada comprising over 1.4 million square feet.

The towers became the first commercial buildings to be certified under the BOMA BEST program. As early adopters, a clear commitment to reducing the environmental impact of the towers was established. For us, an obvious and logical next step was to engage our tenants. The ForeverGreen Tenant Team was created and soon a landlord-sponsored initiative transitioned into a tenant-driven community.

Activities centered on engagement and behavioral change. One example is a monitor shutdown challenge, in which 45 tenants competed to see who could leave the fewest percentage of monitors on in a one-month period. When the competition concluded, the average percentage of monitors left on dropped from 70 percent to only 13 percent. The winning tenants received trophies, but more importantly, all the participants developed a greater awareness of energy conservation.

Another initiative at the centre involved spreading the word about sustainability to the larger tenant community.

The ForeverGreen Tenant Team created a toolkit and hand delivered it to people in the neighborhood. The toolkit provided tenants with a business case for going green, as well as tips on how to save energy in their offices.

By combining the operational with the inspirational, not only was the environmental impact of the towers reduced, but a cohesive tenant community with a mandate for continuous improvement was built.

SIMPLE TECH LOWERS THE BILL: *Capilano Mall in North Vancouver, British Columbia*

Choosing the right technology, or program to maximize energy savings is highly dependent on the unique attributes of a property. We had to be flexible in our thinking in order to innovate, as was the case with Capilano Mall.

Capilano Mall is a fully enclosed center comprising 400,000 square feet of retail and 20,000 square feet of office space owned by British Columbia Investment Management Corporation (bcIMC) and managed by Bentall LP. Responsible property investing is a key consideration, and as part of a shared commitment, so is improving energy efficiency, water usage and waste management systems.

Bentall initiated a review of lighting alternatives with BC Hydro, which resulted in a \$40,000 incentive to complete a lighting retrofit in the mall's parking structure. The retrofit will pay for itself in less than two years, demonstrating an average 15 M kWh per month in energy savings.

To reduce the use of water for exterior landscaping, rain water sensors were added to the irrigation system. This simple, yet smart technology ensures that watering does not occur on rainy days, which occur often in the lower mainland. In addition, the mall adopted xeriscaping principles, replacing conventional outdoor plants with a drought-resistant combination of rhododendrons and roses. Drought resistant decorative grasses were also added among the boxwoods and dogwoods, with bark mulch used in planting beds.

An on-site compost facility now lets visitors enjoy the 120 or so large deciduous trees in bloom, without the environmental impact or cost of trucking the leaves or blooms offsite. Since the program started in the fall of 2007 it has yielded tremendous results—approximately 40-50 yards of rich, composted soil were produced to improve soil conditions and expand existing planting areas at the property. The rich top soil serves as a fertilizer, and acts as a soil conditioner and natural pesticide. It is expected that this facility will produce an excess of composted soil beyond the needs of the mall, creating an opportunity to give back to the local community.

(measuring the future)

When enacting sustainability efforts like those in the case studies above, measurement, monitoring and tracking must be our watchwords. There is an emerging shift toward the disclosure of energy performance here in Canada and around the globe. Whether it's a sticker on the front door of your building, emerging regulations or voluntary emissions reporting, the public sharing of energy performance at properties is fast becoming an expectation of property managers and owners.

In the Canadian provinces, Ontario is currently leading the charge with the Green Energy Act, a 20-year proposed plan to reduce pollution and greenhouse gas emissions, to create meaningful jobs for Ontarians and to enhance community economic development for rural, remote and First Nations communities. **Although details of the program are still being ironed out, the act will see residential sellers and renters of real property disclose energy consumption and efficiency to buyers.**

By embedding state-of-the-art monitoring, measuring and tracking technology and implementing best practices at every property, Bentall LP aims to stay ahead of the sustainability curve and continue to lead clients, tenants and investors in the right direction. ■



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